IARPA

BROAD AGENCY ANNOUNCEMENT

IARPA BAA-13-07

Janus Program

Office of Smart Collection

IARPA BAA-13-07

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IARPA

BROAD AGENCY ANNOUNCEMENT: BAA-13-07

Janus Program

Table of Contents

Table of Contents (continued)

Table of Figures

List of Tables

Part One: OVERVIEW INFORMATION

This publication constitutes a Broad Agency Announcement (BAA) and sets forth research areas of interest in model-based face recognition from multiple views. Awards based on responses to this BAA are considered to be the result of full and open competition.

- **Federal Agency Name –** Intelligence Advanced Research Projects Activity (IARPA), Office of Smart Collection
- **Funding Opportunity Title –** Janus Program
- **Announcement Type –** Initial
- **Funding Opportunity Number –** IARPA-BAA-13-07
- **Catalog of Federal Domestic Assistance Numbers (CFDA) –** Not applicable
- **Dates:**
  - Posting Date: 11/8/2013
  - Proposal Due Date for Initial Round of Selections: 12/23/2013, 5:00 PM EST
  - BAA Closing Date: 11/7/2014
- **Anticipated individual awards –** Multiple awards are anticipated.
- **Types of instruments that may be awarded –** Procurement contract
- **Agency Points of Contact:**

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BAA Summary: The program seeks to enable dramatic improvements in unconstrained face recognition by funding rigorous, high-quality research which uses innovative and promising approaches drawn from a variety of fields to develop novel representations to encode the shape, texture, and dynamics of a face for the purpose of improving face recognition performance from video and still images, and then allowing higher performance search and retrieval based upon these more efficient representations.

Questions: IARPA will accept questions about this BAA until Monday, December 9, 2013. A consolidated Question and Answer response will be publicly posted every few days on the IARPA website (http://www.iarpa.gov/solicitation_janus.html); no answers will go directly to the submitter. Questions about administrative, technical or contractual issues must be submitted to the BAA e-mail address at dni-iarpa-baa-13-07@iarpa.gov. If e-mail is not available, fax questions to 301-851-7673, Attention: IARPA-BAA-13-07. All requests shall include the name, e-mail address (if available) and phone number of a point of contact for the requested information. Do not send questions with proprietary content.

Part Two: FULL TEXT OF ANNOUNCEMENT

SECTION 1: FUNDING OPPORTUNITY DESCRIPTION

The Intelligence Advanced Research Projects Activity (IARPA) often selects its research efforts through the Broad Agency Announcement (BAA) process. The BAA will appear first on the FedBizOpps website, http://www.fedbizopps.gov/, then from a link on the IARPA website, http://www.iarpa.gov, back to the posting on the FedBizOpps website. The following information is for those wishing to respond to this BAA.

IARPA is seeking innovative solutions for the Janus program. The use of a BAA solicitation allows a wide range of innovative ideas and concepts. The Janus Program is envisioned to begin in April 2014 and end in April 2018.

The goal of the Janus program is to enable dramatic improvements in unconstrained face recognition by funding rigorous, high-quality research which uses innovative and promising approaches drawn from a variety of fields to develop novel representations to encode the shape, texture, and dynamics of a face for the purpose of improving face recognition performance from video and still images, and then allowing higher performance search and retrieval based upon these more efficient representations.

1.A. Program Overview

Intelligence analysts often rely on facial images to assist in establishing the identity of an individual, but the sheer volume of possibly relevant video and photographs can be daunting. While automated face recognition tools can assist analysts in this task, current tools perform best on well-posed, frontal facial photos taken for identification purposes. Janus aims to fill this gap by developing tools and techniques to significantly improve the performance of face recognition on unconstrained video and photos.

IARPA seeks dramatic improvements in unconstrained face recognition by funding rigorous, high-quality research drawing on a variety of fields to develop novel representations to encode the shape, texture, and dynamics of a face, and new ways to use these techniques for faster and more accurate search and retrieval. Instead of relying on a “single best frame approach,” these representations shall make use of all available imagery. The program will conduct empirical testing of recognition performance across datasets.[1] The program must also deal with ambiguities and uncertainties due to incomplete data and partial representations.

1.A.1. Technical Objectives

Most conventional face recognition algorithms perform well on frontal facial photos intended for identification purposes. As an example, during the National Institute of Standards and Technology’s (NIST's) Multiple Biometric Evaluation (MBE) 2010, large differences between two images of the same subject for a single factor, like the direction that the subject’s head was facing, caused severe performance degradation among a number of otherwise top-performing commercial algorithms. Similarly, many recognition systems have relied on carefully controlling

[1] For the purpose of Janus, imagery and media will include unconstrained videos, camera stills, and scanned photos exhibiting a broad range of real-world imaging conditions. Imagery and media will generally not have been acquired for the purpose of face recognition.

the physical environment (e.g., camera position, three-point illumination, subject expression), to ensure the facial images collected are as usable as possible (i.e., high “quality” frontals). The methods used for face recognition from video are similar to those used for still images. The video frames that contain the “best” frontal views are extracted and compared independently to frontal mug shots drawn from legacy galleries. In this way, many video-based face recognition approaches remain fundamentally single image to single image recognition approaches utilizing only a small fraction of the video information available, and completely disregarding a wealth of spatial and temporal information.

In the field of computer graphics significant advances have been made in the generation of dynamic realistic faces with a broad range of expression. Sophisticated face models are created from constrained collection conditions, in some cases utilizing many carefully positioned cameras to capture calibrated views under well-controlled illumination conditions. Such facial animation models can accurately represent the texture and dynamics of the human face in great detail. These models support novel photo-realistic renderings of an individual’s face over the entire range of expression.

The Janus program seeks to improve face recognition performance using representations developed from real-world video and images instead of from calibrated and constrained collections. During daily activities, people laugh, smile, frown, yawn, and morph their faces into a broad variety of expressions. For each face, these expressions are formed from unique skeletal and musculature features that are similar through one’s lifetime. Janus representations will exploit the full morphological dynamics of the face to enable better matching and faster retrieval.

As video becomes the pervasive imaging modality, as opposed to a handful of still pictures, the Janus representation-based approach will provide a far more efficient storage mechanism than entering every frame of video into the subject database. The Janus program will demonstrate that such representations will encapsulate the full human facial essence far better than the conventional “bag of frames” approach that simply sub-samples frames from a video. Janus representations will be better suited to match arbitrary imagery even when the pose, illumination, and lighting are dramatically different than any individual snapshot taken from the source imagery.

Developed techniques shall also demonstrate robustness to both increasing and decreasing amounts of imagery. As the amount of imagery increases, an offeror’s approach will remain representative of all available imagery, while not growing linearly with the amount of imagery. On the other hand, as the amount of imagery decreases, an offeror’s proposed approach shall demonstrate slow degradation of the overall performance when the representation is informed by very limited datasets – even down to a single snapshot.

Janus is not focused on generic object recognition, or on the development of advanced interfaces for facial analysis. It is expected that off-the-shelf computer vision algorithms should be sufficient for extracting features of interest from imagery. Janus offerors shall instead propose new representations where additional information (e.g., novel poses, lighting variations) result in improved recognition performance. Each view of a subject possesses new visual information, which can be used to build a better performing recognition representation for that subject.

Janus offerors shall use all available subject imagery to create representations that reflect all the data presented from a single subject. In addition to improving search performance, Janus

offerors shall also propose a representation to allow index-based searching[2] through all the subjects present in datasets consisting of videos and photos.

While a three dimensional texture mapped face model may be a useful conceptual visualization for aggregating multiple images of an individual, such a representation is not required. Representations supporting fast searching may take on radically different underlying forms (e.g., a sparsely populated, high dimensional representation).

Within the representation space, offerors shall discuss how individual subjects will be represented across age variation, which may allow multiple representations per subject as long as they can be associated and the aggregated amount of memory per subject does not surpass the program metrics. Offerors shall also describe their approaches to representation association and/or merging; for example, "How do you support merging novel views, known through external evidence to be from the same individual, into existing representations?" and "How do you meaningfully split and distribute the information in an existing representation across two or more subjects?"

1.A.2. Key Challenge Problems

Janus aims to radically expand the range of conditions under which automated face recognition can establish identity (i.e., determine the similarity between a novel image and prior imagery in existing galleries). To achieve this goal, offerors will need to explore methods of face recognition that consider multiple subject views in a fundamentally different way than current approaches. Instead of treating multiple views as confounding variables, which need to be controlled for, these new approaches shall be capable of using the variation present in multiple views to improve recognition performance. To that end, offerors should consider how their approaches will handle the following general problems:

1. Determining subject co-occurrence within collections of media. That is, how does your approach answer the question "How many distinct people are in this media collection?"
2. Resolving the ambiguities inherent in incorporating partial data into incomplete representations.
3. Reconciling new information with existing representations.

The Government-led test and evaluation (T&E) team will consider these challenge problems throughout the program.

1.A.3. List of Technical Challenges

Offerors should address the following technical challenges in order to meet the objectives of Janus:

- Demonstrate that new algorithms can work robustly on the full range of media, of various resolutions, quality, and quantity to include full video processing through still photographs.
- Demonstrate that the representation is discriminative and can be algorithmically created using multiple views of a subject.
- Demonstrate an off-line repository of all subject representations and perform matching using this representation repository in lieu of the original media.
- Demonstrate that the representation can scale to support an arbitrarily large number of subjects.

[2] Index-based searching parses prior data to build a structure enabling faster information retrieval.

- Exploit all available video and still images of a subject to address the challenges of aging, pose, illumination, and expression (A-PIE).
- Show that the size of a subject's representation is independent of the amount of subject imagery processed (e.g., no bag-of-frames approaches).
- Show that while processing time to build representations can be a function of the amount of imagery per subject, search time shall be dependent only on the number of subjects in the repository and not the amount of imagery used to build the repository.
- Support merging representations known to come from the same individual into one representation and conversely separating representations upon determining they identify different individuals.
- Show how individual subjects will be represented across a wide variation of subject age.
- Support robust methods for working with incomplete, erroneous, and ambiguous data during both acquisition and query time.
- Propose a set of reliable measures for assessing the representation's robustness to partial and incomplete data.
- Enable analysts to understand the impact of partial and uncertain information on recognition decisions.

Offerors shall consider the impact of uncertainty on matching performance, how such uncertainty can be communicated to the analyst, and how their approach will support the analyst decision-making process, for instance audit trails which retain links to relevant media segments.

Offerors are encouraged to utilize domain specific knowledge about the face. Such knowledge might include data-driven models of how the appearance of a face changes with expression, weight, or age. It may also incorporate physical properties of the face such as hair, skin, and cranial-facial musculature models as well as the impact of common facial decorations like makeup, hairstyles, and glasses.

Offerors shall explain in detail how their approach addresses the technical challenges.

1.A.4. Building Robust Implementations

Janus is primarily interested in the science of face recognition. Proposed approaches will require a combination of innovative research and the capability to develop robust, end-to-end implementations. Each successive implementation will leverage research progress made since the previous version. These implementations will be used to evaluate overall progress.

1.A.5. Janus Datasets

At regular intervals throughout the program, the Government will provide performers with datasets as government furnished information (GFI). These datasets will consist of video and still imagery of people in real world scenarios. They will intrinsically be heterogeneous in terms of both content (e.g., foreign political, military, and economic scenarios) and imaging quality (e.g., amateur cell phone videos, professionally developed studio broadcasts). By nature and design, subjects will exhibit significant variations in pose, illumination, and expression. Explicit camera metadata and audio information will be stripped from images and videos. Images and videos may contain many subjects per scene.

The Janus program will be three phases as described in Section 1.B (Program Phases). At the start of the program, dataset zero (DS0) will be furnished to the performers. Datasets delivered during Phase 1 will contain additional annotation on the location of subject faces (i.e., unique subject label and facial bounding box). Performers should expect localization information for

many faces that would not be detectable by commercial state of the art automated techniques. Datasets in Phases 2 and 3 will not include any face localization information. Offerors must describe how they will implement their own automated face localization solutions by the start of Phase 2.

In general, performers will receive supplemental data every six months throughout the program. Each data supplement will include additional views of existing subjects as well as previously unseen subjects. Please refer to the program metrics outlined in Table 1 for details on the number of subjects and hours of videos to expect. Before delivery of new data, the government will provide a characterization of that data to include the size and type of data and descriptions of the expected testing scenarios the data will support. In terms of technical details such as video format, directory layout, and annotation, the datasets will be informed by the protocols and procedures established for the YouTube Faces Database as described by Wolf, Hassner, and Maoz in "Face Recognition in Unconstrained Videos with Matched Background Similarity", IEEE CVPR, 2011.

Performers may conduct small incidental collections to inform and test their representation during development. However, these collections shall be clearly justified in the offeror's proposal and shall conform to requirements in Section 6.B.5 (Human Use) and Section 6.B.13 (Lawful Use and Privacy Protection Measures). In addition, to avoid duplication of effort, offerors should expect to share such datasets with other members of the program. Offerors shall disclose whether they intend to use any pre-existing, proprietary datasets during the program (see Section 4.B.1.3.D, Data Sources). There is no requirement to share pre-existing, proprietary datasets.

1.A.6. Computing Resources and Hardware

Offerors will estimate computational and storage resource requirements by phase. This estimate will consider factors such as: hours of video data, number of subjects, hardware assumptions, and algorithmic complexity. While it is recognized that the "wall clock" speed will depend upon many implementation details including items like physical hardware, image resolution and video frame rates, offerors will include estimates of the time required per subject to produce the metrics required by the program.

Resources specified will be capable of meeting the program expectations in reasonable time. Given the quantity of data and the desire to keep the processing time to the number of person-minutes[3] of data, offerors shall plan sufficient computing resources to ingest and process the required GFI datasets within 2–3 weeks for each phase. Offerors should expand their computational resources as needed throughout the program. For example, they should not size their Phase 1 processing system to meet Phase 3 requirements.

As the intent of this program is algorithm and representation development, specialized hardware should be limited to commonly available commodity devices (e.g., GPU, FPGA). The expected use of such devices shall be explicitly justified in terms of performance improvements specific to program tasks. Offerors shall explain in detail any requirements that exceed current and expected industry best practices in terms of processor speed, memory usage, and storage capabilities.

[3] The number of person-minutes in a clip will be calculated as the total number of minutes for each detected person in the clip. As an example, if three people are detected and tracked across every frame of a one-minute clip, then the length of that clip will be three person-minutes. Offerors shall address how they will report both the architecturally independent person-minute unit and a value normalized with respect to actual system running time (e.g., wall clock, average CPU usage by core).

The Government will provide performers with a uniform T&E framework including a high-level Application Programming Interface (API) with an example API conformant test harness implemented in C++. The supplied test harness will handle the format of the GFI datasets and provide outputs in a format informed by NIST's Multi-Biometrics Evaluations[4]. The performer must deliver all source code developed for their implementation. All software deliverables for each phase shall include complete, API conformant source code, with at a minimum government purpose rights (GPR)[5] (see Section 4.B.1.3.E, Deliverables), capable of being compiled on a standalone government system to recreate the complete contents of the deliverable.

1.A.7. Team Expertise

IARPA anticipates offeror teams may include, but are not limited to, expertise in the fields of biometrics, pattern recognition and machine learning, computer vision and image processing, computer graphics and animation, mathematical statistics and modeling, physiology and anatomy, high performance computing, and software development. Offeror teams might also include detection experts from other fields in which signal processing involves multimodal, noisy, incomplete, and contradictory data. Offeror teams will have all the expertise required to address the challenges, strong management, and a single technical point of contact.

1.A.8. Out of Scope

The following are examples of topics considered out of scope for this program:

- Partial solutions.
- Research that does not have strong theoretical and experimental foundations or plausible scientific support for the offeror's claims.
- Approaches that propose, or are likely to result in, only incremental improvements over the state of the art.
- Technical approaches requiring speech or other non-visual signals.
- Face recognition starting from 3D range data.
- Processing, matching, or recognition of other biometric modalities or fusion with non-face modalities.
- Development of new sensors or imaging systems.
- Development of specific purpose processors such as ASICs (application specific integrated circuits).

Offerors shall demonstrate that their approach is consistent with these restrictions.

[4] http://www.nist.gov/itl/iad/ig/mbe.cfm

[5] "Government purpose rights" means the rights to use, modify, reproduce, release, perform, display, or disclose technical data and computer software within the Government without restriction; and to release or disclose technical data and computer software outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data or software for any United States Government purpose. United States Government purposes include any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data or computer software for commercial purposes or authorize others to do so.

1.B. Program Phases

Janus is a four-year program divided into three phases - two 18-month phases followed by a final 12-month phase, each punctuated by 6-month reviews. Offerors must address how each phase will help to address the challenges of later phases. During the first 18-month phase performers shall demonstrate that their representation: encodes the shape, texture, and dynamics of a subject's face, is discriminative, and can be created using multiple views of a subject. Offerors must explain how their representations will be consistent with the subject media, and show that the collections of representations remain discriminative as the number of subjects grows. Offerors shall include initial estimates for the performance of their systems for subject populations that are orders of magnitude larger than those made available for testing.[6] In the second 18-month phase performers shall quantify how both the quality and quantity of subject media impacts the creation and recognition performance of their representations. In the last 12-month phase, the type of media will expand to include iterative interfaces with the analyst (e.g., computer-aided sketching tools) and non-visual-light imagery, and performers shall develop more efficient computational ways to find matches within very large media collections by reducing search complexity from linear (e.g., comparing to each representation in the database) to logarithmic (e.g., faster searching exploiting indices, feature-based, or pruning approaches). Offerors shall describe how anticipated research advances will be incorporated into successive implementations.

As noted in Section 1.A.5 (Janus Datasets), performers will be provided with datasets approximately every six months for T&E. These datasets will contain both new subjects and novel views of previously seen subjects. In their proposals, offerors shall explain how they will incorporate new data on existing subjects into their representations. The size and difficulty of these sets will increase throughout the program. Datasets will consist of videos and photos with wide variations in subject pose, illumination, and expression. Subject ages within the datasets will range from late teens to early sixties. Performers are expected to identify and extract facial information from videos and stills that will contain multiple individuals.

1.B.1. Phase 1

During Phase 1, performers shall build and demonstrate representations that will eventually address all program objectives. In their proposals, offerors shall discuss the planned representation, their approach to forming it from the provided video and still imagery, how the representation will robustly represent the range of facial variation, and why their representations will be sufficiently discriminative to scale to future phase goals. Offerors shall describe how their representation is capable of leveraging an arbitrarily large number of views per subject, how incremental addition of new imagery will be identified and incorporated into their representation, and how the addition of both new subjects and the incremental addition of new imagery for existing subjects will be handled.

In Phase 1, performers should expect tens of hours of video containing at least 500 subjects. During this phase, datasets in their entirety will provide a reasonably representative set of

[6] Current face recognition algorithms generally seek to minimize a measured “distance” between facial images of the same subject while maximizing the distance between the subject's image and images of the rest of the population. At a high-level, the task of face recognition can be seen as one of measuring the difference between the subject and each of the gallery images to find the best matching image. A match decision is then made by considering that value in the context of a known underlying match, non-match score distribution. Match distances can be compared to class distribution sizes to estimate how separable classes may be in much larger populations.

subject views across a range of conditions. Although face detection and tracking information will be provided (see Section 1.A.5, Janus Datasets), performers should anticipate such information may be imperfect. In Phase 1, age differences for each subject will be in the days to months range.

Within the first five months of Phase 1, performers shall demonstrate the ability to incorporate multiple views of a subject into representation(s) from the provided videos and images. Performers will self-report on each Phase 1 figure of merit to include computing receiver operating characteristic (ROC) curves across the entirety of dataset zero to show progress towards Phase 1 recognition metrics.

By month 11, performers will have additional GFI data for which they shall incorporate both new subjects and novel views of previously seen subjects, report the impact of novel views on previously seen subjects, and show realistic progress toward meeting Phase 1 metrics.

At 15 months performers shall support the government-led T&E team to directly and independently test their systems using sequestered data. Government-led tests will occur between month 15 and the end of the phase.

At the 17-month review, performers shall demonstrate how their system performs against the Phase 1 metrics shown in Table 1, and provide a compelling case for why their approach can scale to meet the goals of the next phase to include estimates of the processing time required to meet Phase 2 and 3 data ingest and performance metrics.

1.B.2. Phase 2

During Phase 2, performers shall demonstrate how the quantity and variation in subject imagery impact both the ability to build representations and their subsequent recognition performance. Offerors should expect hundreds of hours of video with over 2,000 subjects from a wide range of cameras ranging from low-resolution security cameras through High Definition (HD) devices. As in the first phase, multiple video clips per subject will typically be provided, but in Phases 2 and 3, no face detection and tracking information will be provided with the clips. Datasets will exhibit even wider variation in type and source of imagery and may contain as little information as a single subject snapshot. Performers shall demonstrate that representations can be populated using only partial data for a given subject, and show how matching can be performed with partially populated representations created under limited views or with significant occlusions.

Performers will be expected to utilize subsets of the provided GFI data to demonstrate how their recognition performance changes across select variations in information content (e.g., A-PIE, acquisition camera type). As the Phase 2 GFI data will not contain any explicit metadata for determining subject specific attributes such as age and expression, offerors shall propose mechanisms for estimating or otherwise annotating data as necessary for demonstrating the efficacy of their representations. Within-subject age deltas for subjects in the database will be in the months to years range. Offerors shall discuss how they plan on incorporating temporal differences (e.g., months to years of aging, changing hair styling) in their representation.

Offerors shall discuss how they will measure uncertainty within the representation itself and develop a mechanism for effectively communicating uncertainty of the evidence supporting match likelihoods to the analyst. Performers shall demonstrate their technique to measure uncertainty by month 11 of Phase 2.

Offerors shall explain how they can use indexing or other search techniques to allow query-based search times to grow sublinearly with the number of subjects in the representation repository. Offerors shall discuss the degree to which their representations can predict

performance limitations based upon uncertainties within the representations themselves. For example, what will be the impact on recognition performance when using a partially populated representation?

Government-led tests will occur between month 15 of Phase 2 and the end of the Phase 2. By the 17-month review, performers shall demonstrate how their system performs against the Phase 2 metrics shown in Table 1, and provide a compelling case for why their approach can scale to meet the goals of Phase 3.

1.B.3. Phase 3

In the final phase, performers will be expected to handle larger numbers of subjects and ingest larger amounts of imagery. Full search and retrieval will be critical at these scales. Retrieval techniques shall also explore alternate forms of analyst interaction with the search process, to possibly include inputs like computer-aided police sketch tools. The definition of what constitutes a dataset will be expanded to include video originating outside of the visible light spectrum (e.g., near infrared). Phase 3 will examine the performance of systems on this expanded definition of datasets and explore reducing the time requirements for searching large media collections. Offerors shall propose waypoints for months 5 and 11 of Phase 3.

Offerors should expect thousands of hours of video of over 10,000 subjects with a wide range of ages. Multiple video clips per subject, with little or no ancillary information, will be provided. Technical reviews during Phase 3 shall focus on demonstrating that your systems are capable of supporting the variety and scale of imagery expected in transition scenarios. Throughout Phase 3 performers shall provide a method for the government-led team to directly and independently test performer systems using sequestered data.

Evaluations in Phase 3 will include approximations of continuous camera feed scenarios in which a comparatively small number of subjects are queried against tens of thousands of non-repeating, non-matching subjects. Offerors shall address the ability of their approach to handle such continuous recognition scenarios and performers shall be prepared to demonstrate this at the six-month point of Phase 3. At month 10, time constrained tests will be conducted during which performers will be provided with a new dataset containing hundreds of hours of video and asked to self-report on this set within tens of hours.

1.B.4. Program Milestones and Metrics

The Government will use the program milestones and metrics to evaluate the effectiveness of proposed solutions in achieving the stated program objectives, and to determine whether satisfactory progress is being made to warrant continued funding of the program. These metrics are intended to bound the scope of effort, while affording maximum flexibility, creativity, and innovation in proposing solutions to the stated problem.

As the consequences of a misidentification can be high, the phase metrics of this program are designed to explicitly favor a trade off toward decreasing the likelihood of misidentification. To that end, the target of all phases is a true accept rate of 85 percent but performers are expected to improve the false accept rate of their system dramatically with each phase.

Table 1 – Metrics and Milestones by Phase

Figure of Merit		Milestone 1 Phase 1	Milestone 2 Phase 2	Milestone 3 Phase 3
Modeling	**Subjects**	500+	2,000+	10,000+
	Hours of Media	Tens	Hundreds	Thousands
	Build Time	N/A	2x person-minutes	1x person-minutes
	Model Size	Held constant at 32 MB per subject across all phases		
Matching	**TAR**	Held constant at 0.85 across all phases		
	FAR	0.01	0.001	0.0001
	Correct Retrieval	95% within top 10 (<2% of subject pool)	95% within top 20 (<1% of subject pool)	95% within top 25 (<0.25% of subject pool)
	Query time	linear	sublinear	logarithmic

Table 1 - Legend

- Subjects: number of individuals for whom identification performance will be assessed
- Hours of Media: the total number of hours of media a performer should expect to process during a particular phase, still imagery of subjects will also be provided
- Model Size: the total storage size permitted to encode a single subject this is not a requirement for a separate, independently identifiable, per model representation, size will be measured in aggregate (e.g., the maximum for 500 subjects x 32MB is 16GB)
- True Accept Rate (TAR) and False Accept Rate (FAR): aggregate statistics for correct identification and misidentification TAR would be 1.00, and an ideal FAR would be 0
- Correct Retrieval: the percentage of cases that the correct query subject identification is contained within the most likely *k* (i.e., 10, 20, 25) candidates
- Query Time: the order of magnitude computational time required to search for a query out of an existing representation of *N* subjects, expressed as a function of *N*

1.B.5. Waypoints

Waypoints are proposer-defined, task-driven intermediate steps toward a milestone. They are measurable accomplishments reflected in the workplan and depicted on the schedule. In addition to demonstrating the above phase milestones, offerors are expected to develop means and methods to quantify how their systems support the broader goals of the program. The intent of these waypoints is to provide a measure of progress toward meeting the program milestones so that the Program Manager and advisors can provide more effective guidance and assistance to performers. The Program Manager and advisors will use these waypoints to assess whether course corrections are needed to ensure program success.

Offerors shall support technical reviews at months 5, 11, and 17 of Phases 1 and 2 and months 5 and 11 of Phase 3 where progress is presented for the proposed waypoints for each respective phase. With the exception of the month 5 review at Phase 1, offeror waypoints ***must*** include specific performance goals against the program figures of merit in Table 1. Offerors

shall include waypoints which address the overall challenges (see Section 1.A.3, List of Technical Challenges) and problems (see Section 1.A.2, Key Challenge Problems) of the program. Each waypoint shall be distinct, and shall demonstrate progress in longer-term research activities. These offeror-defined waypoints may include the execution of key experiments or the successful integration of key capabilities. In Phases 1 and 2, offeror-defined waypoints will be assessed during the reviews in months 5, 11 and 17. In Phase 3, offeror-defined waypoints will be assessed during the reviews in months 5 and 11 of the phase.

A synopsis of the offerors' technical and programmatic waypoints shall be listed and described. A table format (see Table 2) is strongly preferred. Progress against these waypoints will be reviewed during site visits. Offerors shall include a rationale, definition, metrics, and an evaluation plan for each waypoint, and shall also describe how their research advances will be incorporated into successive implementations.

Table 2 - Sample Waypoint Table

Phase	Months after Start of Phase	Description	Metric	Success Criteria
1	5			
	⋮			

1.B.6. Test and Evaluation

Testing and evaluation will be data driven. The first data set DS0 (see Section 1.A.5, Janus Datasets) will be provided to performers at the start of the program. Subsequent datasets will be furnished approximately every six months. Two categories of evaluation will occur during the program: performer-conducted evaluations and independent government evaluations using performer systems. Beginning with the delivery of DS1 in Phase 1, performers shall provide the government within 30 calendar days with test results from a performer-conducted evaluation of the provided GFI dataset. All performer results submitted to IARPA shall be machine-generated without human in the loop guidance. These performer-conducted evaluations across the GFI datasets will be an essential element in determining technical progress. Performers shall also conduct other Government defined evaluations and report the results at their technical reviews. These evaluations may feature novel government identified subsets or augmented protocols designed to exercise one or more aspects of the proposed approach. Subject datasets containing new subjects and novel views of previously presented subjects may be used.

Five months before the end of each phase, performers will begin to work with the program to facilitate an independent government evaluation of their implementation on sequestered data. Three months before the end of each phase, the government team will require remote or on-site access to performers' systems to conduct independent T&E using sequestered datasets. Finally, during site visits, performers may be asked to demonstrate their systems on novel datasets.

Other assessments, qualitative and quantitative, will be performed by the government T&E team to evaluate the scientific merit of the approach and the research findings.

1.C. Program Timeline

The Government will use the following timeline with programmatic gates to maintain the four-year program schedule. In addition to reviewing the technical progress, technical reviews will assess programmatic progress against the research work plan to understand progress against the plan and allow proactive discussion should any revision become necessary.

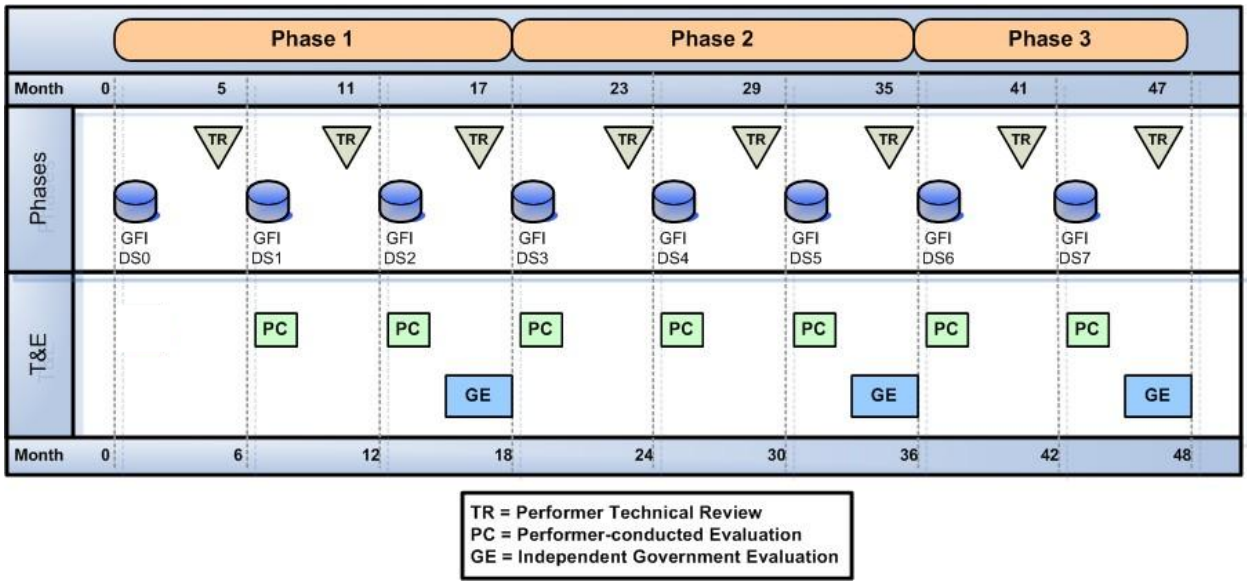

Figure 1 - High-level Phase Schedule

Table 3 - Program Timeline

Months after start of Phase	Event	Description
Start	Kickoff	Review technical approach and work plan
5	Technical Review	Assess progress against work plan, review self-reported test results and source code
11	Technical Review	Assess progress against work plan, review self-reported test results, and source code
12	Workshop	Teams present to an invited audience
15	Government T&E	Begin government T&E of prototypes
17	**Milestone 1**	**Demonstrate performance against Phase 1 metrics**
17	Technical Review	Assess progress against work plan, review government test results and source code
18	Technical Report, software delivery	Comprehensive technical report including notable accomplishments and results, and software deliverables with documentation.
Phase 2		
Start	Kickoff	Review technical approach and work plan
5	Technical Review	Assess progress against work plan, review government test results, and source code
6	Workshop	Teams present to an invited audience
11	Technical Review	Assess progress against work plan, review government test results and source code
15	Government T&E	Begin government T&E of prototypes
17	**Milestone 2**	**Demonstrate performance against Phase 2 metrics**
17	Technical Review	Assess progress against work plan, review government test results, and source code
18	Workshop	Teams present to an invited audience
18	Technical Report, software delivery	Comprehensive technical report including notable accomplishments and results, and software deliverables with documentation.
Phase 3		
Start	Kickoff	Review technical approach and work plan
5	Technical Review	Assess progress against work plan, review government test results and source code
11	**Milestone 3**	**Demonstrate performance against Phase 3 metrics**
11	Technical Review	Assess progress against work plan, review government test results and source code
12	Workshop	Teams present and demonstrate to an invited audience
12	Technical Report, software delivery	Comprehensive final technical report including notable accomplishments and results, and software deliverables with documentation.

SECTION 2: AWARD INFORMATION

The Janus program is envisioned as a 4-year effort that is intended to begin approximately April 2014. The Base Period of the contract is the Phase 1 (18 months); there are two possible option periods – Phase 2 (Option Period 1) for 18 months and Phase 3 (Option Period 2) for 12 months. This BAA will result in awards for Phase 1, with options for Phase 2 and 3 of the Janus program.

Funding for Option Periods will depend upon performance during the Base Period, (and succeeding Option Periods), as well as program priorities, the availability of funding, and IARPA priorities. Funding of Option Periods is at the sole discretion of the Government. Participants considered for funding in the Option Periods will be those teams that have made significant technical and programmatic progress in the Base Period (and succeeding Optional period) and have correctly understood and contributed to the overarching goals of the program. Depending on earlier Base/Option Period performance, technical evaluations, as well as availability of funding and IARPA priorities, performers that fail to demonstrate such progress, or that offer only minor improvements above the current state of the art will not be funded for Option Periods of the program.

Multiple Phase 1 awards are anticipated. The amount of resources made available under this BAA will depend on the quality of the proposals received and the availability of funds. The Government reserves the right to select for negotiation all, some, one or none of the proposals received in response to this solicitation and to make awards without discussions with offerors. The Government also reserves the right to conduct discussions if the Source Selection Authority determines them to be necessary. Additionally, IARPA reserves the right to accept proposals in their entirety or to select only portions of proposals for negotiations for award. In the event that IARPA desires to award only portions of a proposal, negotiations may be opened with that offeror.

Awards under this BAA will be made to offerors on the basis of the evaluation criteria listed in 5.A – Evaluation Criteria, program balance, and availability of funds. It is intended that proposals selected for negotiation may result in a procurement contract. However, the Government reserves the right to negotiate the type of award instrument it determines appropriate under the circumstances.

Offerors whose proposals are selected for negotiations will be contacted before award to obtain additional information required for award. The Government may establish a deadline for the close of fact-finding and negotiations that allows a reasonable time for the award of a contract. Offerors that are not responsive to government deadlines established and communicated with the request may be removed from award consideration. Offerors may also be removed from award consideration should the parties fail to reach agreement on contract terms, conditions, and cost/price within a reasonable time.

SECTION 3: ELIGIBILITY INFORMATION

3.A. Eligible Applicants

All responsible sources capable of satisfying the Government's needs may submit a proposal. Historically Black Colleges and Universities (HBCUs), Small Businesses, Small Disadvantaged Businesses and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals; however, no portion of this announcement will be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas for exclusive competition among these entities. Other Government Agencies, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), Government-Owned, Contractor-Operated (GOCO) facilities, Government Military Academies, and any other similar type of organization that has a special relationship with the Government, that gives them access to privileged and/or proprietary information or access to Government equipment or real property, are not eligible to submit proposals under this BAA or participate as team members under proposals submitted by eligible entities.

Foreign participants and/or individuals may participate to the extent that such participants comply with any necessary Non-Disclosure Agreements, Security Regulations, Export Control Laws and other governing statutes applicable under the circumstances.

3.A.1. Procurement Integrity, Standards of Conduct, Ethical Considerations and Organizational Conflicts of Interest (OCI)

"Organizational conflict of interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the Government, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

If a prospective offeror, or any of its proposed subcontractor teammates, believes that a potential conflict of interest exists or may exist (whether organizational or otherwise), the offeror should promptly raise the issue with IARPA and submit a waiver request by e-mail to the mailbox address for this BAA at "dni-iarpa-baa-13-07@iarpa.gov". All waiver requests must be submitted through the offeror, regardless of whether the waiver request addresses a potential OCI for the offeror or one of its subcontractor teammates. A potential conflict of interest includes but is not limited to any instance where an offeror, or any of its proposed subcontractor teammates, is providing either scientific, engineering and technical assistance (SETA) or technical consultation to IARPA. In all cases, the offeror shall identify the contract under which the SETA or consultant support is being provided. Without a waiver from the IARPA Director, neither an offeror, nor its proposed subcontractor teammates, can simultaneously provide SETA support or technical consultation to IARPA and compete or perform as a performer under this solicitation.

All facts relevant to the existence of the potential conflict of interest, real or perceived, should be disclosed in the waiver request. The request should also include a proposed plan to avoid, neutralize or mitigate such conflict. The offeror, or subcontractor teammate as appropriate, shall certify that all information provided is accurate and complete, and that all potential conflicts, real or perceived, have been disclosed. It is recommended that an offeror submit this request as soon as possible after release of the BAA before significant time and effort are expended in preparing a proposal. If, in the sole opinion of the Government, after full consideration of the circumstances, the conflict situation cannot be resolved, the request for waiver will be denied,

and any proposal submitted by the offeror that includes the conflicted entity will be withdrawn from consideration for award.

As part of their proposal, offerors who have identified any potential conflicts of interest shall include either an approved waiver signed by the IARPA Director or a copy of their waiver request. Otherwise, offerors shall include in their proposal a written certification that neither they nor their subcontractor teammates have any potential conflicts of interest, real or perceived. A sample certification is provided in Appendix D.

If, at any time during the solicitation or award process, IARPA discovers that an offeror has a potential conflict of interest, and no waiver request has been submitted by the offeror, IARPA reserves the right to immediately withdraw the proposal from further consideration for award.

Offerors are strongly encouraged to read "Intelligence Advanced Research Projects Activity's (IARPA) Approach to Managing Organizational Conflicts of Interest (OCI)", found on IARPA's website at http://www.iarpa.gov/IARPA_OCI_081809.pdf.

3.B. US Academic Organizations

According to Executive Order 12333, as amended, paragraph 2.7, "Elements of the Intelligence Community are authorized to enter into contracts or arrangements for the provision of goods or services with private companies or institutions in the United States and need not reveal the sponsorship of such contracts or arrangements for authorized intelligence purposes. Contracts or arrangements with academic institutions may be undertaken only with the consent of appropriate officials of the institution."

It is highly recommended that offerors submit with their proposal a completed and signed Academic Institution Acknowledgement Letter for each U.S. academic organization that is a part of their team, whether the academic organization is serving in the role of prime, or a subcontractor or consultant at any tier of their team. A template of the Academic Institution Acknowledgement Letter is enclosed in this BAA in Appendix A. It should be noted that an appropriate senior official from the institution, typically the President, Chancellor, Provost, or other appropriately designated official must sign the completed form. Note that this paperwork **must** be received before IARPA can enter into any negotiations with any offeror when a U.S. academic organization is a part of its team.

3.C. Other Eligibility Criteria

3.C.1. Collaboration Efforts

Collaborative efforts and teaming arrangements among potential offerors are strongly encouraged. Specific content, communications, networking and team formations are the sole responsibility of the participants.

SECTION 4: APPLICATION AND SUBMISSION INFORMATION

This notice constitutes the total BAA and contains all information required to submit a proposal. No additional forms, kits, or other materials are required.

4.A. Content and Form of Application Submission

4.A.1. Proposal Information

Proposals must be received by the time and date specified in Section 4.C.1, (Due Dates), in order to be considered during the initial round of selections. IARPA may evaluate proposals received after this date for a period of up to one year from the date of initial posting on FedBizOpps. Awards under this BAA will be made to offerors on the basis of the evaluation criteria listed in 5.A – Evaluation Criteria, program balance, and availability of funds.

The typical proposal should express a consolidated effort in support of one or more related technical concepts or ideas. Disjointed efforts should not be included in a single proposal.

Offerors should submit proposals for a Base Period of 18 months plus 2 possible option periods of an 18-month Option Period 1 and a 12-month Option Period 2.

The Government intends to use employees of Scitor Corporation, and its sub-contractor, RAI Government Services, LLC, and Noblis to provide expert advice regarding portions of the proposals submitted to the Government. These personnel will have signed and be subject to the terms and conditions of non-disclosure agreements. By submission of its proposal, an offeror agrees that its proposal information may be disclosed to employees of these organizations for the limited purpose stated above. Offeror's objection to the disclosure of information to these non-Government advisors shall be provided in writing to the Contracting Officer before the date set for receipt of proposals. The written objection shall include a detailed statement for the basis of the objection. Blanket Disclosure Statements found on proposal cover sheets contained in the Technical and Cost Proposals do not constitute written objection to the Government's use of non-Government Advisors

Only Government personnel will make evaluation and selection for negotiation determinations under this BAA.

All administrative correspondence and questions regarding this solicitation should be directed by e-mail to dni-iarpa-baa-13-07@iarpa.gov. Proposals shall be submitted in accordance with the procedures provided in Section 4.C.2, (Proposal Delivery). Proposals shall **not** be submitted by hand, e-mail or fax; any such proposals received in this manner will be disregarded. See below for proposal submission instructions.

Access web address, https://iarpa-ideas.gov, and register to submit your proposal against IARPA-BAA-13-07 per the instructions in Section 4.C.2. When approved, please upload your proposal and all attachments.

4.A.2. Proposal Format

All proposals must be in the format given below. Nonconforming proposals may be rejected without review. Proposals shall consist of two volumes: "Volume 1 - Technical and Management Proposal" and "Volume 2 - Cost Proposal." All pages shall be formatted for printing on 8-1/2 by 11 inch paper with type not smaller than 12 point. Foldout pages shall not be used. For tables, charts, graphs and figures, the text shall be no smaller than 10 point. The page limitation for full proposals includes all figures, tables, and charts. All pages must be numbered. Unnecessarily

elaborate brochures or presentations beyond what is sufficient to present a complete and effective proposal are not acceptable and will be discarded without review.

4.A.3. Proposal Classification

The Government requires that proposals submitted under this BAA will be unclassified. In accordance with Section 6.B.1, (Security), below, no classified information will be accepted in response to this BAA.

4.B. Proposal Content Specifics

Each proposal submitted in response to this BAA shall consist of the following:

Volume 1 – Technical & Management Proposal
- Section 1 – Cover Sheet & Transmittal Letter
- Section 2 – Summary of Proposal
- Section 3 – Detailed Proposal
- Section 4 – Attachments (number appropriately for elements included)
  - 1 – Signed Academic Institution Acknowledgment Letter(s), if required
  - 2 – Restrictions on Intellectual Property Rights (if applicable)
  - 3 – OCI Waiver Request or Certification
  - 4 – Bibliography
  - 5 – Relevant Papers (up to three)
  - 6 – Key Management and Personnel Resumes (each resume not to exceed 3 pages)
  - 7 – Consultant Letter(s) of Commitment

Volume 2 – Cost Proposal
- Section 1 – Cover Sheet
- Section 2 – Detailed Estimated Cost Breakdown

4.B.1. Volume 1, Technical and Management Proposal {Limit of 30 pages}

Volume 1, Technical and Management Proposal, may include an attached bibliography of relevant technical papers or research notes (published and unpublished) which document the technical ideas and approach on which the proposal is based. Copies of not more than three relevant papers can be included with the submission. The submission of other supporting materials along with the proposal is strongly discouraged and will not be considered for review. Except for the cover sheet, transmittal letter, table of contents (optional), and the attachments listed in Section 4, (Attachments), Volume 1 shall not exceed 30 pages. Any pages exceeding this limit will be removed and not considered during the evaluation process. Full proposals must be accompanied by an official transmittal letter, using contractor format. All full proposals must be written in English.

4.B.1.1. Section 1: Cover Sheet & Transmittal Letter

A. Cover sheet: (NOTE: See Appendix B for Cover Sheet Template)
- (1) BAA number
- (2) IARPA Office: Office of Smart Collection
- (3) Lead organization submitting proposal
- (4) Type of business, selected among the following categories: “LARGE BUSINESS”, “SMALL DISADVANTAGED BUSINESS”, “OTHER SMALL BUSINESS”, “HBCU”, “MI”, “OTHER EDUCATIONAL”, OR “OTHER NONPROFIT”

(5) Contractor's reference number (if any)
(6) Other team members (if applicable) and type of business for each
(7) Proposal title
(8) Technical point of contact to include: title, first name, last name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available)
(9) Administrative point of contact to include: title, first name, last name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available)
(10) Volume 1 no more than 30 pages? Yes/No
(11) IP rights have been addressed in accordance with Appendix G? Yes/No
(12) OCI waiver or waiver request (see Section 3.A.1) included? Yes/No
(12a) If no OCI, a written certification must be included (see Appendix D for letter template - include as Attachment 3)
(13) Are one or more U.S. Academic Organizations part of your team? Yes/No
(13a) If Yes, are you including an Academic Institution Acknowledgement Statement with your proposal for each U.S. Academic Organization that is part of your team? (Appendix A Template, Attachment 1) Yes/No
(14) Total funds requested from IARPA and the amount of cost share (if any)
(15) Date proposal was submitted.

B. Official Transmittal Letter.

4.B.1.2. Section 2: Summary of Proposal (Limit the summary to two pages)

Section 2 shall provide an overview of the proposed work as well as introduce associated technical and management issues. This section shall contain a technical description of and technical approach to the research as well as a succinct portrayal of the uniqueness and benefits of the proposed work. It shall make the technical objectives clear and quantifiable and shall provide a project schedule with definite decision points and endpoints. Offerors must address:

A. Innovative claims for the proposed research. This section is the centerpiece of the proposal and should succinctly describe the uniqueness and benefits of the proposed approach relative to the state-of-the-art and alternate technologies and approaches.

   Summary of the products, transferable technology and deliverables associated with the proposed research results. Define measurable deliverables that show progress toward achieving the stated program milestones. Restrictions on Intellectual Property Rights, all proprietary claims to the results, prototypes, intellectual property, or systems supporting and/or necessary for the use of the research, results, and/or prototype should be provided in Attachment 2. If there are no proprietary claims, this should be stated. Should no proprietary claims be made, Government rights will be unlimited.

B. Schedule and milestones for the proposed research, including overall estimates of cost for each task. Summarize, in table form, the cost, schedule and milestones for the proposed research, including estimates of cost for each deliverable, total cost and company cost share, if applicable. Do not include proprietary information with the milestones.

C. Overview of the technical approach and plan. Technical rationale, technical approach and constructive plan for accomplishing the technical goals that realize the innovative claims and deliverables. (This section will be supplemented with a more detailed plan in Volume 1, Section 3 of the proposal.)

D. Related research. General discussion of other research in this area.

E. Project contributors. Offerors must include a clearly defined organizational chart of all anticipated project participants and their roles in the project. Accompanying this chart, offerors will provide brief biographical sketches of key personnel and significant contributors and a detailed description of the roles they will play based on their qualifications and on their level of effort in each phase of the program. Discussion of the teaming strategy among team members shall be included. If the team intends to use consultants, they must be included in the organizational chart, as well. Indicate if the person will be an "individual" or "organizational" consultant (that is, will the consultant represent himself/herself, or his/her organization). In both cases, the organizational affiliation should be identified. The consultant should make a written commitment to be available to the team; the commitment should be attached to Section 4, Attachment 7, of the Technical Volume. Interested parties are encouraged to leverage personnel that are dedicated to BAA requirements no less than 20% of their time. If any participant is scheduled for less than 20% of his/her time, the offeror will provide a clear and compelling justification as to how benefit can be gained from that person's participation at the specified level of effort. A chart, such as the following example below in Table 4, is suggested.

Table 4 - Sample Organizational Chart

Participant	Organization	Role	Unique, Relevant Capabilities	Specific Task(s) / Contributions	Time Commitment
John Doe	ABC University	PI/Key Personnel	Pattern Recognition, Machine Learning	Face Recognition	25%
John Doe, Jr.	ABC University	Key Personnel	Computer Vision, Image Processing	Face Modeling	40%
Jane Roe	ABC University	Significant Contributor	Scientific Programming Open Source Software	C++ Programming, API	75%
Jane Doe	ABC University	Contributor	Mathematical Statistics	Face Recognition	25%
John Doe, III	XYZ Co.	Co-PI/Key Personnel	Computer Graphics, Animation	Face Modeling	50%
Wayne Roe	XYZ Co.	Significant Contributor	High Performance Computing	Sub-linear Search	50%
John Doe, IV	XYZ University	Consultant (Individual)	Physiology, Anatomy	Face Modeling	200 hours

4.B.1.3. Section 3: Detailed Proposal Information

This section of the proposal shall provide the detailed, in-depth discussion of the proposed research. Specific attention must be given to addressing both the risks and payoffs of the proposed research and why the proposed research is desirable for IARPA to pursue. This part shall provide:

A. Statement of Work (SOW) - In plain English, clearly define the technical tasks and sub-tasks to be performed, their durations and the dependencies among them. For each task and sub-task, provide:
   - A general description of the objective;

- A detailed description of the approach to be taken, developed in an orderly progression and in enough detail to establish the feasibility of accomplishing the goals of the task;
- Identification of the primary organization responsible for task execution (prime, sub-contractor, team member, etc.) by name;
- The exit criteria for each task/activity, i.e., a product, event or milestone that defines its completion;
- Definition of all deliverables (e.g., data, reports, software, etc.) to be provided to the Government in support of the proposed research tasks/activities.

Note: Do not include any proprietary information in the SOW.

At the end of this section, provide a Gantt chart, showing all the tasks and sub-tasks on the left with the performance period (in years/quarters) on the right. All milestones should be clearly labeled on the chart.

B. A detailed description of the objectives, scientific relevance, technical approach and expected significance of the work. The key elements of the proposed work should be clearly identified and related to each other. Proposals should clearly detail the technical method(s) and/or approach(es) that will be used to meet or exceed each program milestone and should provide ample justification as to why the proposed method(s)/approach(es) is/are feasible. Metrics to be used to validate successful achievement should be included. Any anticipated risks should be described and possible mitigations proposed. General discussion of the problem without specific detail about the technical implementation will result in an unacceptable rating.

C. State-of-the-art. Comparison with other on-going research, highlighting the uniqueness of the proposed effort/approach and differences between the proposed effort and the current state-of-the-art clearly stated. Identify the advantages and disadvantages of the proposed work with respect to potential alternative approaches.

D. Data sources: Identification and description of data sources to be utilized in pursuit of the project research goals. Explain clearly how the data selected will be an appropriate and adequate set for exploring the research topic being proposed.

Offerors proposing to use existing datasets must provide written verification that all data were obtained in accordance with U.S. laws and, where applicable, are in compliance with End User License Agreements, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons.

Offerors proposing to obtain new datasets must ensure that their plan for obtaining the data complies with U.S. Laws and where applicable, with End User License Agreement, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons.

It is not expected that the research will involve human subjects. Proposals which include such research must include a compelling justification. The Janus program does not intend to fund data collection involving human subjects.

The Government reserves the right to reject a proposal if it does not appropriately address all data issues.

E. Deliverables

Deliverables shall be defined that show progress toward achieving the stated program Milestones. Deliverables are to include all data, software and tool prototypes, evaluation analyses and documents (such as source code algorithm flow charts, algorithm parameters, software documentation, methodology documentation, research reports, and publications), presentations, software executables, and source code. Other deliverables are to include research status reports including waypoint results; tools; and completed implementations.

For all software deliverables, the performer shall include all source code produced in the course of software development for the delivered version of software. In addition to source code, these deliverables must include appropriate scripting, subordinate libraries, release notes, and other necessary components, data, and documentation. These and all other deliverables developed as part of the Janus program shall be delivered prior to the end of the current contract Period of Performance.

In Attachment 2 of the proposal, offerors must describe the proposed approach to intellectual property for all deliverables, together with a supporting rationale of why this approach is in the Government's best interest. To the greatest extent feasible, offerors should not include background proprietary technical data and computer software as the basis of their proposed technical approach. If offerors desire to use proprietary technical data or computer software or both as the basis of their proposed approach, in whole or in part, in Attachment 2 they should: 1) clearly identify such data/software and its proposed particular use(s); 2) explain how the Government will be able to reach its program goals (including transition) within the proprietary model offered; and 3) provide possible nonproprietary alternatives in any area that might present transition difficulties or increased risk or cost to the Government under the proposed proprietary solutions.

Additionally, if offerors propose the use of any open source or freeware, any conditions, restrictions or other requirements imposed by that software must also be addressed in Attachment 2. Offerors should leverage the format in Appendix G for their response. (See also Section 6.B.3., Intellectual Property). The technical content of Attachment 2 shall include only the information necessary to address the proposed approach to intellectual property; any other technical discussion in Attachment 2 will not be considered during the evaluation process. Attachment 2 is limited to 4 pages.

IARPA recognizes only the definitions of intellectual property rights in accordance with the terms as set forth in the Federal Acquisition Regulation (FAR) part 27. If offerors propose intellectual property rights that are not defined in FAR part 27, offerors must clearly define such rights in Attachment 2 of their proposal. Offerors are reminded of the requirement for prime contractors to acquire sufficient rights from subcontractors to accomplish the program goals.

The Government requires at a minimum GPR for all deliverables; anything less will be considered a significant weakness in the proposal.

F. Cost, schedule, milestones. Cost, schedule, and milestones for the proposed research, including estimates of cost for each deliverable delineated by the primes and major sub-contractors, total cost, and company cost share, if any. Where the effort consists of multiple portions that could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each. The milestones must not include proprietary information.

G. Offeror's previous accomplishments. Discuss previous accomplishments and work in this or closely related research areas and how these will contribute to and influence the current work.

H. Facilities. Describe the facilities that will be used for the proposed effort, including computational and experimental resources.

I. Detailed Management Plan. The Management Plan should identify both the organizations and the individuals within those organizations that make up the team and delineate the expected duties, relevant capabilities and task responsibilities of team members and expected relationships among team members. Expected levels of effort (percentage time or fraction of a Full-Time Equivalent (FTE) for all key personnel and significant contributors should be clearly noted. A description of the technical, administrative and business structure of the team and the internal communications plan should be included. Project/function/sub-contractor relationships (including formal teaming agreements), Government research interfaces, and planning, scheduling, and control practices should be described. The team leadership structure should be clearly defined. Provide a brief biography of the key personnel (including alternates, if desired) who will be involved in the research along with the amount of effort to be expended by each person during the phase. Participation by key industry personnel and significant contributors is expected to meet or exceed 50% of their time. Participation by key academic personnel and significant contributors is expected to meet or exceed 25% of their time. A compelling explanation of any variation from this figure is required.

J. Resource Share. Include the type of support, if any, the offeror might request from the Government, such as facilities, equipment or materials, or any such resources the offeror is willing to provide at no additional cost to the Government to support the research effort. Cost sharing is not required from offerors and is not an evaluation criterion, but is encouraged where there is a reasonable probability of a potential commercial application related to the proposed research and development effort.

K. The names of other federal, state or local agencies or other parties receiving the proposal and/or funding the proposed effort. If none, so state.

4.B.1.4. Section 4: Attachments

[NOTE: The attachments listed below do not count against the Volume 1 page limit.]

Attachment 1: Signed Academic Institution Acknowledgement Letter(s) Template provided as Appendix A. See paragraph 3.B, US Academic Institutions.

Attachment 2: Restrictions on Intellectual Property Rights (if applicable) Template provided as Appendix G. This attachment is limited to 4 pages.

Attachment 3: OCI Waiver Request or Certification (See template for OCI certification, provided as Appendix D). For an OCI Waiver Request, see paragraph 3.A.1. Procurement Integrity, Standards of Conduct, Ethical Considerations and Organizational Conflicts of Interest (OCI)

Attachment 4: Bibliography A brief bibliography of relevant technical papers and research notes (published and unpublished) which document the technical ideas on which the proposal is based.

Attachment 5: Relevant Papers Copies of not more than three relevant papers may be included in the submission.

Attachment 6: Key Management and Personnel Resumes Each resume is limited to 3 pages.

Attachment 7: Consultant Letter(s) of Commitment

4.B.2. Volume 2: Cost Proposal {No Page Limit}

Section 1: Cover Sheet

(1) BAA number;

(2) IARPA Office: Office of Smart Collection

(3) Lead organization submitting proposal

(4) Based on applicable NAICS code (INSERT NAICS CODE HERE), indicate the type of business, selected among the following categories: "LARGE BUSINESS", "SMALL DISADVANTAGED BUSINESS", "OTHER SMALL BUSINESS", "HBCU", "MI", "OTHER EDUCATIONAL", OR "OTHER NONPROFIT"

(5) Contractor's reference number (if any)

(6) Other team members (if applicable) and type of business for each

(7) Proposal title

(8) Technical point of contact to include: title, first name, last name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available)

(9) Administrative point of contact to include: title, first name, last name, street address, city, state, zip code, telephone, fax (if available), and electronic mail (if available)

(10) Award instrument requested: cost-plus-fixed-fee (CPFF), cost-contract—no fee, cost sharing contract –or other type of procurement contract (specify)

(11) Place(s) and period(s) of performance

(12) Total proposed cost separated by basic award and option(s) (if any)

(13) Name, address, telephone number of the offeror's Defense Contract Management Agency (DCMA) administration office or equivalent cognizant contract administration entity, if known

(14) Name, address, telephone number of the offeror's Defense Contract Audit Agency (DCAA) audit office or equivalent cognizant contract audit entity, if known

(15) Date proposal was prepared

(16) DUNS number

(17) TIN number

(18) Cage Code

(19) Proposal validity period [minimum of 180 days]

(20) Cost Summaries (Templates provided as Appendices E and F)

(21) Size of Business, in accordance with NAICS Code xxxxxx (six digits)

[NOTE: See Appendix C for Cover Sheet Template]

Section 2: Estimated Cost Breakdown

(1) Cost element breakdown for the base period and each option period for the offeror and each subcontractor. See Appendices E and F for format.

(2) Total cost broken down by major task

(3) Major program tasks by fiscal year

(4) Proposed subcontract and consultant costs and equipment purchases

(5) Proposed purchase of any information technology

(6) A summary of projected funding requirements by month

(7) The source, nature and amount of industry cost-sharing, if any

(8) Identification of pricing assumptions which may require incorporation into the resulting award instrument (e.g., use of Government Furnished Property/ Facilities/Information, access to Government Subject Matter Experts).

The prime contractor is responsible for compiling and providing all subcontractor proposals. All subcontractor proposals shall include burdened rates in the cost breakdown listed above. If a proposal is selected for negotiations, both the prime and subcontractors must be prepared to present full cost proposals including all direct and indirect rates immediately upon request by the contracting officer. Subcontractor proposals should include Interdivisional Work Transfer Agreements (ITWA) or similar arrangements. Where the effort consists of multiple portions which could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each. NOTE: For IT[7] and equipment purchases, include a letter stating why the offeror cannot provide the requested resources from its own funding.

Supporting cost and pricing information must be provided in sufficient detail to substantiate the summary cost estimates in Volume 1. Include a description of the method used to estimate costs and supporting documentation. *Key personnel must be listed by name for the prime and all subcontractors*. Note: "cost or pricing data" shall be required if the offeror is seeking a procurement contract award of $700,000 or greater unless the offeror requests an exception from the requirement to submit cost or pricing data.

Consultant estimated costs should be included in the cost estimates.

[7]IT is defined as "any equipment, or interconnected system(s) or subsystem(s) of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the agency. (a) For purposes of this definition, equipment is used by an agency if the equipment is used by the agency directly or is used by a contractor under a contract with the agency which – (1) Requires the use of such equipment; or (2) Requires the use, to a significant extent, or such equipment in the performance of a service or the furnishing of a product. (b) The term "information technology" includes computers, ancillary software, firmware and similar procedures, services (including support services), and related resources. (c) The term "information technology" does not include – (1) Any equipment that is acquired by a contractor incidental to a contract; or (2) Any equipment that contains embedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment, such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, is not information technology."

4.C. Submission Details

4.C.1. Due Dates

Proposals must be received by or before 5:00 p.m. Eastern time on Monday, December 23, 2013, in order to be considered during the initial round of selections.

4.C.2. Proposal Delivery

Proposals must be submitted electronically through the IARPA Distribution and Evaluation System (IDEAS). **Offerors interested in providing a submission in response to this BAA must first register by electronic means in accordance with the instructions provided on the following web site:** https://iarpa-ideas.gov**. Offerors who plan to submit proposals for evaluation in the initial round are strongly encouraged to register at least one week prior to the due date for the initial round of proposals.** Offerors who do not register in advance do so at their own risk, and IARPA will not extend the due date for the initial round of proposals to accommodate such offerors. Failure to register as stated will prevent the offeror's submission of documents.

After registration has been approved, offeror's should upload proposals, including Volume 1, Volume 2, scanned certifications and permitted additional information in 'pdf' format. Offerors are responsible for ensuring compliant and final submission of their proposals to meet the BAA submittal deadlines. Time management to upload and submit is wholly the responsibility of the offeror.

Upon completing the proposal submission the offeror will receive an automated confirmation email from IDEAS. Please forward that automated message to dni-iarpa-baa-13-07@iarpa.gov. IARPA strongly suggests that the offeror document the submission of their proposal package by printing the electronic receipt (time and date stamped) that appears on the final screen following compliant submission of a proposal to the IDEAS website.

Proposals submitted by any means other than the Proposal Submission Website at https://iarpa-ideas.gov (e.g., hand-carried, postal service, commercial carrier and email) will not be considered unless the offeror attempted electronic submission, but was unsuccessful. Should an offeror be unable to complete the electronic submission, the offeror must employ the following procedure. The offeror must send an e-mail to dni-iarpa-baa-13-07@iarpa.gov prior to the initial round proposal due date and time specified in the BAA, and indicate that an attempt was made to submit electronically but that the submission was unsuccessful. This e-mail must include contact information for the offeror. Additional guidance will be provided.

Proposals must be submitted by the time and date specified in the BAA in order to be considered during the initial round of selections. IARPA may evaluate proposals received after this date for a period up to one year from the date of initial posting on FedBizOpps. Selection remains contingent on proposal evaluation, program balance and availability of funds. Failure to comply with the submission procedures may result in the submission not being evaluated.

4.D. Funding Restrictions

Facilities construction costs are not allowable under this activity. Funding may not be used to pay for commercialization of technology. While funding may be used to procure images, from existing commercial databases or open sources, funding may not be used for direct / camera-based collection of human subject imagery.

SECTION 5: APPLICATION REVIEW INFORMATION

5.A. Evaluation Criteria

The criteria to be used to evaluate and select proposals for this Program BAA are described in the following paragraphs. Because there is no common statement of work, each proposal will be evaluated on its own merits and its relevance to the Program goals rather than against other proposals responding to this BAA. Specifics about the evaluation criteria are provided below, in descending order of importance.

5.A.1. Overall Scientific and Technical Merit

Overall scientific and technical merit of the proposal is substantiated, including unique and innovative methods, approaches, and/or concepts. The offeror clearly articulates an understanding of the problem to be solved. The technical approach is credible, and includes a clear assessment of primary risks and a means to address them. The offeror can expect the selection process to include an assessment of the proposal against the state-of-the-art.

5.A.2. Effectiveness of Proposed Work Plan

The feasibility and likelihood that the proposed approach will satisfy the Program's milestones and metrics are explicitly described and clearly substantiated along with risk mitigation strategies for achieving stated milestones and metrics. The proposal reflects a mature and quantitative understanding of the Program milestones and metrics, and the statistical confidence with which they may be measured. Any offeror-proposed milestones and metrics are clear and well-defined, with a logical connection to enabling offeror decisions and/or Government decisions. The schedule to achieve the milestones is realistic and reasonable.

The role and relationships of prime and sub-contractors is clearly delineated with all participants fully documented. Work plans demonstrate the ability to provide full Government visibility into and interaction with key technical activities and personnel; and a single point of responsibility for contract performance. Work plans must also demonstrate that key personnel have sufficient time committed to the Program to accomplish their described Program roles.

The requirement for and the anticipated use or integration of Government Furnished Property (GFP) including all equipment, facilities, information, etc., is fully described including dates when such GFP, GFE (Government Furnished Equipment), GFI (Government Furnished Information) or other similar Government-provided resources will be required.

The offeror's proposed intellectual property and data rights are consistent with the Government's need to be able to effectively manage the Program and evaluate the technical output and deliverables, to communicate Program information across Government organizations, and to support transition of the Program results to Intelligence Community users at a reasonable cost.

5.A.3. Contribution and Relevance to IARPA Mission and Program Goals

The offeror describes how the proposed solution meets the letter and intent of the stated program goals and all elements within the proposal exhibit a comprehensive understanding of the problem. The offeror clearly addresses how the proposed effort will meet and progressively demonstrate Janus Program goals. The proposed approach to intellectual property rights is in the Government's best interest.

5.A.4. Relevant Experience and Expertise

The offeror's capabilities, related experience, facilities, techniques, or unique combination of these which are integral factors for achieving the proposal's objectives will be evaluated, as well as qualifications, capabilities, and experience of the proposed principal investigator, team leader, and key personnel critical in achieving the proposal objectives. Time commitments of key personnel must be sufficient for their proposed responsibilities in the effort.

5.A.5. Cost Realism

The proposed costs are reasonable and realistic for the work proposed. Estimates are "realistic" when they are neither excessive nor insufficient for the effort to be accomplished. The proposal documents all anticipated costs including those of associate, participating organizations. The proposal demonstrates that the respondent has fully analyzed budget requirements and addressed resulting cost risks. Other sponsors who have funded or are funding this offeror for the same or similar efforts are identified. The Government shall evaluate how well all cost data are traceable and reconcilable.

IARPA recognizes that undue emphasis on cost may motivate offerors to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. IARPA discourages such cost strategies. Cost reduction approaches that will be received favorably include innovative management concepts that maximize direct funding for technology and limit diversion of funds into overhead.

Equipment, software, and data collection expenses must be well justified, and will be a consideration in cost realism. Travel, especially foreign travel, is well justified and required for successful execution of the proposed work.

After selection and before award, the Contracting Officer will negotiate cost/price reasonableness.

5.B. Review and Selection Process

IARPA's policy is to ensure impartial, equitable, comprehensive proposal evaluations and to select the source (or sources) whose offer meets the Government's technical, policy and programmatic goals. In order to provide the desired evaluation, qualified Government personnel will conduct reviews and (if necessary) convene panels of experts in the appropriate areas.

IARPA will only review proposals against the criteria described under Section 5.A above, and will not evaluate them against other proposals, since they are not submitted in accordance with a common work statement. For evaluation purposes, a proposal is the document described in Section 4. Other supporting or background materials submitted with the proposal will not be considered.

5.C. Proposal Retention

IARPA's policy is to treat all proposals and white papers as competitive information and to disclose their contents only for the purpose of evaluation. Proposals will not be returned. Upon completion of the source selection process, the original of each proposal received will be retained at IARPA and all other non-required copies will be destroyed. A certification of destruction may be requested, provided that the formal request is sent to IARPA via e-mail within 5 days after notification of proposal results.

SECTION 6: AWARD ADMINISTRATION INFORMATION

6.A. Award Notices

As soon as the evaluation of a proposal is complete, the offeror will be notified that: 1) the proposal has been selected for negotiations, or, 2) the proposal has not been selected.

6.B. Administrative and National Policy Requirements

6.B.1. Security

The Government anticipates that proposals submitted under this BAA will be unclassified. No classified information will be accepted in response to this BAA.

6.B.2. Proprietary Data

It is the policy of IARPA to treat all proposals as competitive information, and to disclose their contents only for the purpose of evaluation.

All proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. It is the offeror's responsibility to clearly define to the Government what is considered proprietary data.

6.B.3. Intellectual Property

6.B.3.a. Noncommercial Items (Technical Data and Computer Software)

Offerors responding to this BAA requesting a procurement contract to be issued under the FAR shall identify in Section 4 of its proposal all noncommercial technical data and noncommercial computer software that it plans to generate, develop and/or deliver under any proposed award instrument in which the Government will acquire less than unlimited rights and to assert specific restrictions on those deliverables. In the event that offerors do not submit such information, the Government will assume that it automatically has "unlimited rights" to all noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless it is substantiated that development of the noncommercial technical data and noncommercial computer software occurred with mixed funding. If mixed funding is anticipated in the development of noncommercial technical data and noncommercial computer software generated, developed and/or delivered under any award instrument, then offerors should identify the data and software in question as subject to GPR. The Government will automatically assume that any such GPR restriction is limited to a period of five (5) years, at which time the Government will acquire "unlimited rights" unless the parties agree otherwise. Offerors are advised that the Government will use this information during the source selection evaluation process to evaluate the impact of any identified restrictions and may request additional information from the offeror, as may be necessary, to evaluate the offeror's assertions. If no restrictions are intended, then the offeror should state "NONE."

The Government desires Government Purpose Rights (at a minimum) for all deliverables, anything less will be considered a significant weakness in the proposal.

A sample format for complying with this request is shown in the following table.

Table 5 - Noncommercial Items Rights Assertions

NONCOMMERCIAL ITEMS			
Technical Data, Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

For all technical data and computer software that the offeror intends to deliver with other than unlimited rights that are identical or substantially similar to technical data and computer software that the offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract, the offeror shall identify the contract number under which the data, software, or documentation were produced; the contract number under which, and the name and address of the organization to whom, the data and software were most recently delivered or will be delivered; and any limitations on the Government's rights to use or disclose the data and software, including, when applicable, identification of the earliest date the limitations expire.

6.B.3.b. Commercial Items (Technical Data and Computer Software)

Offerors responding to this BAA requesting a procurement contract to be issued under the FAR shall identify in Volume 1, Section 4 (Attachment 2, template provided as Appendix G) of its proposal all commercial technical data and commercial computer software that may be embedded in any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the Government's use of such commercial technical data and/or commercial computer software. In the event that offerors do not submit the list, the Government will assume that there are no restrictions on the Government's use of such commercial items. The Government may use the list during the source selection evaluation process to evaluate the impact of any identified restrictions and may request additional information from the offeror, as may be necessary, to evaluate the offeror's assertions. If no restrictions are intended, then the offeror should state "NONE."

A sample format for complying with this request is shown in the following table.

Table 6 - Commercial Items Rights Assertions

COMMERCIAL ITEMS			
Technical Data, Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

6.B.3.c. All Offerors – Patents

Include documentation using the format provided in Appendix G, proving ownership of or possession of appropriate licensing rights to all patented inventions (or inventions for which a patent application has been filed) that will be utilized under the proposal for the IARPA program. If a patent application has been filed for an invention that the proposal utilizes, but the application has not yet been made publicly available and contains proprietary information, the offeror may provide only the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and a summary of the patent title, together with either: 1) a representation that the offeror owns the invention, or 2) proof of possession of appropriate licensing rights in the invention.

6.B.3.d. All Offerors – Intellectual Property Representations

All offerors shall provide a good faith representation that you either own or possess appropriate licensing rights to all other intellectual property that will be utilized under your proposal for the IARPA program. Additionally, offerors shall provide a short summary for each item asserted with less than unlimited rights that describes the nature of the restriction and the intended use of the intellectual property in the conduct of the proposed research. See format in Appendix G.

6.B.4. Meeting and Travel Requirements

Performers are expected to assume responsibility for administration of their projects and to comply with contractual and Program requirements for reporting, attendance at Program workshops and availability for site visits.

6.B.4.a. Workshops

The Janus Program intends to hold a Program-level Kick-Off meeting during the first month of the Program and then hold Program-level workshops every twelve months. These 2-3 day Workshops will focus on technical aspects of the Program and on facilitating open technical exchanges, interaction and sharing among the various Program participants. Program participants will be expected to present the technical status and progress of their projects as well as to demonstrate their technical, non-proprietary capabilities to other participants and invited guests at these events. For costing purposes, the offeror should expect the workshop to alternate first in the Washington, D.C. area and then outside the Washington, D.C. area for each year of the contract.

6.B.4.b. Site Visits

Site visits will generally take place twice yearly during the life of the Program. These visits will occur at the Contractor's facility. Reports on technical progress, details of successes and issues, contributions to the Program goals and technology demonstrations will be expected at such visits.

6.B.5. Human Use

It is not expected that the research will involve human subjects. Proposals which include such research must include a compelling justification. The Janus program does not intend to fund data collection involving human subjects. All imagery for this effort is expected to be publically procured, open source, or Government furnished data collected outside of this program.

6.B.6. Publication Approval

It is anticipated that research funded under this Program will be unclassified research that will not require a pre-publication review. However, offerors should note that pre-publication approval of certain information may be required if it is determined that its release may result in the disclosure of sensitive intelligence information. A courtesy soft copy of any work submitted for publication must be provided to the IARPA Program Manager and the Contracting Officer Representative (COR), at least two weeks prior to submission, and a final copy must be provided upon publication.

6.B.7. Export Control

(1) The offeror shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this contract. In the absence of available license exemptions/exceptions, the offeror shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of (including deemed exports) hardware, technical data, and software, or for the provision of technical assistance.

(2) The offeror shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this contract, including instances where the work is to be performed on-site at any Government installation (whether in or outside the United States), where the foreign person will have access to export-controlled technologies, including technical data or software.

(3) The offeror shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.

(4) The offeror shall appropriately mark all contract deliverables controlled by ITAR and/or EAR.

(5) The offeror shall be responsible for ensuring that the provisions of this clause apply to its sub-contractors**.**

(6) The offeror will certify knowledge of and intended adherence to these requirements in the representations and certifications of the contract.

6.B.8. Subcontracting

It is the policy of the Government to enable small business and small disadvantaged business concerns to be considered fairly as sub-contractors to contractors performing work or rendering services as prime contractors or sub-contractors under Government contracts and to assure that prime contractors and sub-contractors carry out this policy. Each offeror that submits a proposal that includes sub-contractors; is selected for funding (pending negotiations); and has proposed a funding level above the maximum cited in the FAR, may be asked to submit a sub-contracting plan before award, in accordance with FAR 19.702(a) (1) and (2). The plan format is outlined in FAR 19.704. Offerors must declare teaming relationships in their proposals and must specify the type of teaming arrangement in place, including any exclusive teaming arrangements. IARPA neither promotes, nor discourages the establishment of exclusive teaming agreements within offeror teams. Individuals or organizations associated with multiple teams must take care not to over-commit those resources being applied.

6.B.9. Reporting

Fiscal and management responsibility are important to the Janus Program. Although the number and types of reports will be specified in the award document, all performers will, at a minimum, provide the Contracting Office, Contracting Officer Representative and the Janus Program Manager with monthly technical reports and monthly financial reports. The reports shall be prepared and submitted in accordance with the procedures contained in the award document and mutually agreed upon before award. Technical reports will describe technical highlights and accomplishments, priorities and plans, issues and concerns; will provide evaluation results; and will detail future plans. Financial reports will present an on-going financial profile of the project, including total project funding, funds invoiced, funds received, funds expended during the preceding month and planned expenditures over the remaining

period. Additional reports and briefing material may also be required, as appropriate, to document progress in accomplishing program metrics.

Performers will prepare a final report of their work at the conclusion of each phase of the Janus Program and at the conclusion of the performance period of the award (even if the research may continue under a follow-on vehicle). The final report will be delivered to the Contracting Agent, Contracting Officer Representative and the Janus Program Manager. The report will include:

- Introduction & Background to include supporting literature, hypotheses, and assumptions
- Materials & Methods
- System design and solution to include software/hardware specifications
- Discussion, conclusions, and possible generalization(s)
- Anticipated path ahead
- References

6.B.10. System for Award Management (SAM)

Selected offerors not already registered in the System for Award Management (SAM) may be required to register in SAM prior to any award under this BAA. Information on SAM registration is available at https://www.sam.gov.

6.B.11. Representations and Certifications

Selected offerors not already registered in the System for Award Management (SAM) may be required to register in SAM prior to any award under this BAA. Information on SAM registration is available at https://www.sam.gov.

6.B.12. Internet Payment Platform (IPP)

Unless using another approved electronic invoicing system, offerors will be required to submit invoices for payment directly via the Internet Payment Platform (IPP) at *http://ipp.gov*. Registration to IPP will be required for any award under this BAA.

6.B.13. Lawful Use and Privacy Protection Measures

All data gathered by performers must be obtained in accordance with U.S. laws and in compliance with the End User License Agreement, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. Before using such data, the performer must provide proof that the data was acquired in accordance with U.S. laws and regulations.

SECTION 7: AGENCY CONTACTS

Administrative, technical or contractual questions concerning this BAA should be sent via e-mail to "dni-iarpa-baa-13-07@iarpa.gov". If e-mail is not available, fax questions to 301-851-7673, Attention: IARPA-BAA-13-07. All requests must include the name, email address (if available), and phone number of a point of contact for the requested information. Do not send questions with proprietary content. IARPA will accept questions about the BAA until its closing. A consolidated Question and Answer response will be periodically posted on the IARPA website (www.IARPA.gov); no answers will go directly to the submitter.

Points of Contact:
The technical POC for this effort is

Dr. Mark J. Burge, IARPA, Office of Smart Collection
Attn: IARPA-BAA-13-07
Office of the Director of National Intelligence
Intelligence Advanced Research Projects Activity (IARPA)
Washington, DC 20511
Fax: (301) 851-7673
E-mail: dni-iarpa-baa-13-07@iarpa.gov

All emails must have the BAA number (IARPA-BAA-13-07) in the Subject Line.

SAMPLE DOCUMENTS

IARPA Broad Agency Announcement

Janus Program

IARPA-BAA-13-07

APPENDIX A

Academic Institution Acknowledgement Letter Template

IARPA Broad Agency Announcement

Janus Program

IARPA-BAA-13-07

-- Please Place on Official Letterhead --

<insert date>

To: Mr. Thomas Kelso
Chief Acquisition Officer
ODNI/IARPA
Office of the Director of National Intelligence
Washington, D.C. 20511

Subject: Academic Institution Acknowledgement Letter

Reference: Executive Order 12333, As Amended, Para 2.7

This letter is to acknowledge that the undersigned is the responsible official of <insert name of the academic institution>, authorized to approve the contractual relationship in support of the Office of the Director of National Intelligence's Intelligence Advanced Research Projects Activity and this academic institution.

The undersigned further acknowledges that he/she is aware of the Intelligence Advanced Research Projects Activity's proposed contractual relationship with <insert name of institution> through IARPA-BAA-13-07 and is hereby approved by the undersigned official, serving as the president, vice-president, chancellor, vice-chancellor, or provost of the institution.

_____

<Name> Date

<Position>

APPENDIX B
Sample Cover Sheet for Volume 1

VOLUME 1: Technical/Management Details

BROAD AGENCY ANNOUNCEMENT (BAA)

Janus Program

IARPA-BAA-13-07

(1) BAA Number	IARPA-BAA-13-07
(2) IARPA Office	Office of Smart Collection
(3) Lead Organization Submitting Proposal	
(4) Type of Business, Selected Among the Following Categories: “Large Business”, “Small Disadvantaged Business”, “Other Small Business”, “HBCU”, “MI”, “Other Educational”, or “Other Nonprofit”	
(5) Contractor’s Reference Number (if any)	
(6) Other Team Members (if applicable) and Type of Business for Each	
(7) Proposal Title	
(8) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(10) Volume 1 no more than 30 pages?	Yes/No
(11) Restrictions on Intellectual property rights details provided in Appendix G format.	Yes/No
(12) OCI Waiver or Waiver Request (see Section 3.A.1) Included?	Yes/No
(12a) If No, is written certification included (Appendix D)?	Yes/No
(13) Are one or more U.S. Academic Organizations part of your team?	Yes/No
(13a) If Yes, are you including an Academic Institution Acknowledgement Statement with your proposal for each U.S. Academic Organization that is part of your team (Appendix A)?	Yes/No
(14) Total Funds Requested from IARPA and the Amount of Cost Share (if any)	$
(15) Date Proposal as Submitted.	

APPENDIX C
Sample Cover Sheet for Volume 2

BROAD AGENCY ANNOUNCEMENT (BAA)

Janus Program

IARPA-BAA-13-07

(1) BAA Number	IARPA-BAA-13-07
(2) IARPA Office	Office of Smart Collection
(3) Lead organization submitting proposal	
(4) Type of Business, Selected Among the Following Categories: “Large Business”, “Small Disadvantaged Business”, “Other Small Business”, “HBCU”, “MI”, “Other Educational”, or “Other Nonprofit”	
(5) Contractor’s Reference Number (if any)	
(6) Other Team Members (if applicable) and Type of Business for Each	
(7) Proposal Title	
(8) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(10) Award Instrument Requested: Cost-Plus-Fixed-Fee (CPFF), Cost-Contract—No Fee, or Other Type of Procurement Contract (specify)	
(11) Place(s) and Period(s) of Performance	
(12) Total Proposed Cost Separated by Basic Award and Option(s) (if any)	Base Period: Option Period 1: Option Period 2: Total:
(13) Name, Address, Telephone Number of the offeror’s Defense Contract Management Agency (DCMA) Administration Office or Equivalent Cognizant Contract Administration Entity, if Known	
(14) Name, Address, Telephone Number of the offeror’s Defense Contract Audit Agency (DCAA) Audit Office or Equivalent Cognizant Contract Audit Entity, if Known	
(15) Date Proposal was Prepared	
(16) DUNS Number	
(17) TIN Number	
(18) Cage Code	
(19) Proposal Validity Period [minimum of 180 days]	
(20) Cost Summaries Provided (Appendices E and F)	
(21) Size of Business in accordance with NAICS Code xxxxxx	

APPENDIX D
Organizational Conflicts of Interest Certification Letter Template

IARPA Broad Agency Announcement (BAA)

Janus Program

IARPA-BAA-13-07

(Month DD, YYYY)

Office of the Director of National Intelligence

Intelligence Advanced Research Projects Activity (IARPA)

Office of Smart Collection

Attn: Dr. Mark J. Burge

Washington, DC 20511

Subject: OCI Certification

Reference: Janus, IARPA-BAA-13-07, (Insert assigned proposal ID#, if received)

Dear Dr. Mark J. Burge,

In accordance with IARPA Broad Agency Announcement IARPA-BAA-13-07, Section 3.A.1, (Procurement Integrity, Standards of Conduct, Ethical Considerations, and Organizational Conflicts of Interest), and on behalf of _____ (offeror name) I certify that neither _____ (offeror name), nor any of our subcontractor teammates has as a potential conflict of interest, real or perceived, as it pertains to the Janus Program.

If you have any questions, or need any additional information, please contact (Insert name of contact) at (Insert phone number) or (Insert e-mail address).

Sincerely,

(Insert organization name) (Must be signed by an official that has the authority to bind the organization)

(Insert signature)

(Insert name of signatory)

(Insert title of signatory)

APPENDIX E
Sample Prime Contractor Cost Element Sheet for Volume 2

IARPA Broad Agency Announcement (BAA)

Janus Program

IARPA-BAA-13-07

PRIME CONTRACTOR COST ELEMENT SHEET [SAMPLE]			
Complete a Cost Element Sheet for the Base Period and <u>each</u> Option Period			
COST ELEMENT	**BASE**	**RATE**	**AMT**
DIRECT LABOR (List each labor category separately. Identify Key Personnel by name.)	Hrs	$	
TOTAL DIRECT LABOR			$
FRINGE BENEFITS	$	%	$
TOTAL LABOR OVERHEAD	$	%	$
SUBCONTRACTORS, IOTS, CONSULTANTS (List Separately. See below table)			$
MATERIALS & EQUIPMENT(list each material and equipment item separately)	qty	$ unit price	$
SOFTWARE & INTELLECTUAL Property (List separately. See table below.)	$	$	$
TOTAL MATERIALS & EQUIPMENT			$
MATERIAL OVERHEAD	$	%	$
TRAVEL (list each trip separately)	# of travelers	$ price per traveler	$
TOTAL TRAVEL			$
OTHER DIRECT COSTS (list each item separately)	qty	$ unit price	$
TOTAL ODCs			$
G&A	$	%	$
SUBTOTAL COSTS			$
COST OF MONEY	$	%	$
TOTAL COST			$
PROFIT/FEE	$	%	$
TOTAL PRICE/COST			$
GOVERNMENT SHARE, IF APPLICABLE			$
RECIPIENT SHARE, IF APPLICABLE			$

SUBCONTRACTORS/INTERORGANIZATIONAL TRANSFERS (IOT) & CONSULTANTS PRICE SUMMARY

A	B	C	D	E	F
SUBCONTRACTOR IOT & CONSULTANT NAME	**SOW TASKS PERFORMED***	**TYPE OF AWARD**	**SUBCONTRACTOR, IOT& CONSULTANT QUOTED PRICE**	**COST PROPOSED BY PRIME FOR THE SUBCONTRACTOR, IOT & CONSULTANT**	**DIFFERENCE (Column D - Column E) IF APPLICABLE**
TOTALS					

*Identify Statement of Work, Milestone or Work Breakdown Structure paragraph, or provide a narrative explanation as an addendum to this Table that describes the effort to be performed.

APPENDIX F
Sample Subcontractor Cost Element Sheet for Volume 2

IARPA Broad Agency Announcement (BAA)

Janus Program

IARPA-BAA-13-07

SUBCONTRACTOR COST ELEMENT SHEET [SAMPLE]			
Complete a Cost Element Sheet for each applicable period			
COST ELEMENT	**BASE**	**BURDENED RATE**	**AMT**
DIRECT LABOR (List each labor category separately. Identify Key Personnel by name.)	# hrs	$	$
TOTAL DIRECT LABOR			$
SUBCONTRACTORS, IOTS, CONSULTANTS			$
MATERIALS & EQUIPMENT (List each material and equipment item separately.)	qty	$ unit price	$
TOTAL MATERIALS & EQUIPMENT			$
TRAVEL (list each trip separately)	# of travelers	$ price per traveler	$
TOTAL TRAVEL			$
OTHER DIRECT COSTS (List each item separately.)	qty	$ unit price	$
TOTAL OTHER DIRECT COSTS			$
TOTAL PRICE/COST			$

Software and Intellectual Property Costs		
Item	**Cost**	**Date of Expiration**
(List)		

APPENDIX G
Restrictions on Intellectual Property Rights

For

Volume 1: Technical and Management Proposal

IARPA Broad Agency Announcement (BAA)

Janus Program

IARPA-BAA-13-07

APPENDIX G

Restrictions on Intellectual Property Rights

Noncommercial Items (Technical Data and Computer Software)

NONCOMMERCIAL ITEMS			
Technical Data, Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

Commercial Items (Technical Data and Computer Software)

COMMERCIAL ITEMS			
Technical Data, Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

APPENDIX H
Acronyms

IARPA Broad Agency Announcement (BAA)

Janus Program

IARPA-BAA-13-07

Acronym	Expansion
API	Application Programming Interface
A-PIE	Aging, Pose, Illumination, and Expression
BAA	Broad Agency Announcement
Cage Code	Commercial and Government Entity
CCR	Central Contractor Registry
CFDA	Catalog of Federal Domestic Assistance Numbers
CFR	Code of Federal Regulations
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
DNI	Director of National Intelligence
CPFF	Cost-Plus-Fixed-Fee
DS0	Dataset Zero
DUNS	Data Universal Numbering System (Dun & Bradstreet)
EAR	Export Administration Regulations
FAR	False Accept Rate
FAR	Federal Acquisition Regulation
FFRDCs	Federally Funded Research and Development Centers
FPGA	Field-Programmable Gate Array
FTE	Full-Time Equivalent
GFE	Government Furnished Equipment
GFI	Government Furnished Information
GFP	Government Furnished Property
GOCO	Government-Owned, Contractor-Operated
GPR	Government Purpose Rights
GPU	Graphics Processing Unit
HBCU	Historically Black Colleges and Universities
HD	High Definition
HVAC	Heating, Ventilation, and Air Conditioning
IARPA	Intelligence Advanced Research Projects Activity
IDEAS	IARPA Distribution and Evaluation System
IOT	Inter-Organizational Transfer
IPP	Internet Payment Platform
IT	Information Technology
ITAR	International Traffic in Arms Regulations
ITWA	Interdivisional Work Transfer Agreements
Janus	Two-Faced Roman god – not an Acronym
NIST	National Institute of Standards and Technology
MB	Megabyte

Acronym	Expansion
MBE	Multiple Biometric Evaluation
NAICS	North American Industry Classification System
NISPOM	National Industrial Security Program Operating Manual
OCI	Organizational Conflicts of Interest
ODC	Other Direct Costs
ODNI	Office of the Director of National Intelligence
ORCA	Online Representations and Certifications Application
PI	Principal Investigator
POC	Point of Contact
ROC	Receiver Operating Characteristic
SETA	Scientific, Engineering and Technical Assistance
SME	Subject Matter Expert
SOW	Statement of Work
TAR	True Accept Rate
T&E	Test and Evaluation
3D	Three Dimensional
TIN	Taxpayer Identification Number
UARC	University Affiliated Research Centers